

# Switchgear and Switchboard Apparatus Manufacturing: 2002

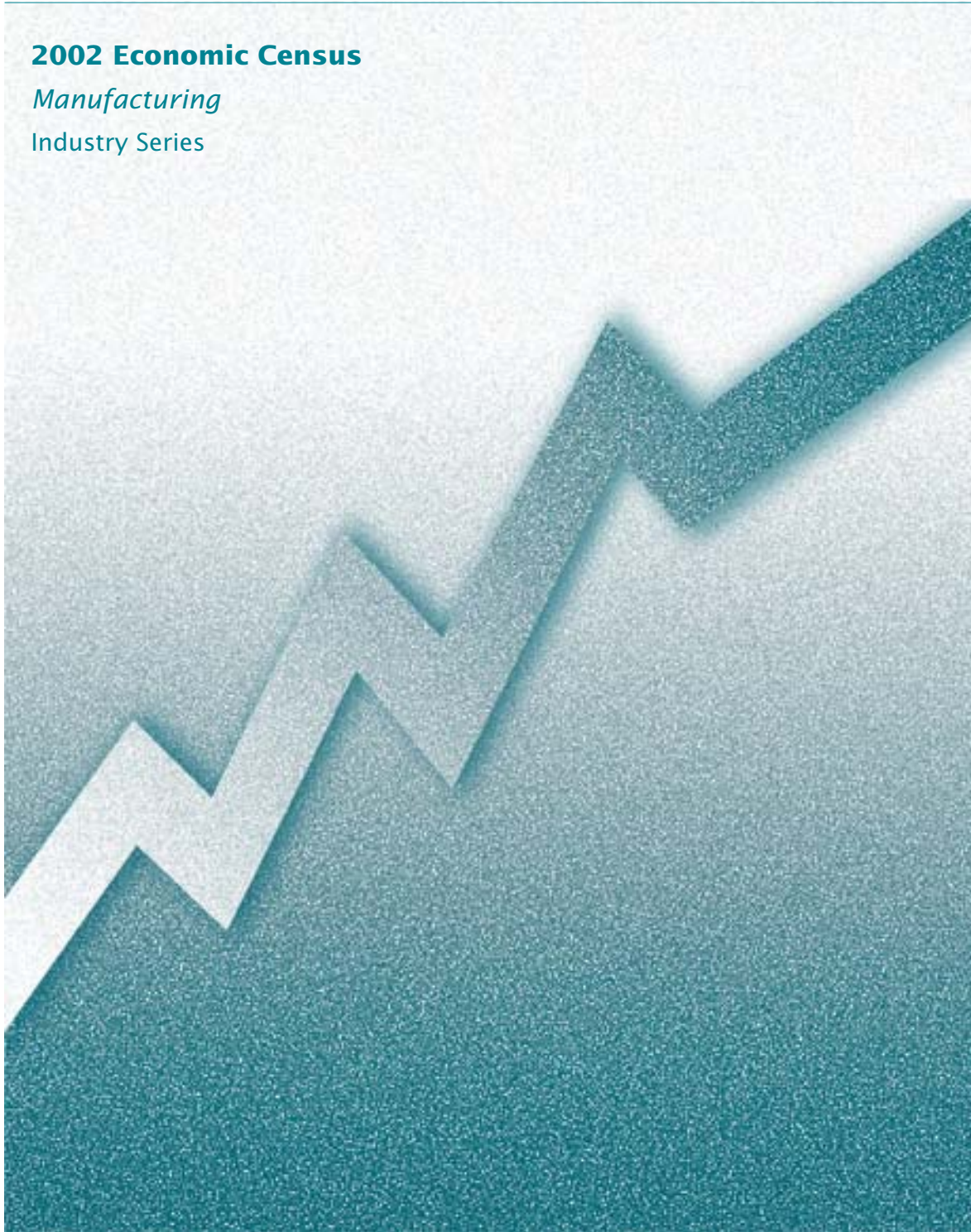
Issued December 2004

EC02-311-335313 (RV)

## 2002 Economic Census

*Manufacturing*

Industry Series



USCENSUSBUREAU

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



## CONTENTS

Introduction to the Economic Census .....	v
Manufacturing .....	ix

### Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002 .....	2
3. Detailed Statistics by Industry: 2002 .....	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002 .....	5
6a. Products Statistics: 2002 and 1997 .....	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	7
7. Materials Consumed by Kind: 2002 and 1997.....	8

### Appendixes

A. Explanation of Terms .....	A-1
B. NAICS Codes, Titles, and Descriptions .....	B-1
C. Methodology .....	C-1
D. Geographic Notes .....	--
E. Metropolitan and Micropolitan Statistical Areas .....	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997 .....	F-1

-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
335313, Switchgear and switchboard apparatus manufacturing .....	2002..	446	528	37 181	1 449 603	25 941	51 255	831 540	4 294 460	3 558 284	7 894 237	'191 357
	2001..	N	N	41 851	1 585 762	30 066	58 710	910 625	4 666 562	4 439 803	9 112 738	196 791
	2000..	N	N	43 878	1 676 859	31 676	62 680	967 632	5 011 724	4 871 335	9 898 617	193 327
	1999..	N	N	42 929	1 606 796	30 234	62 222	923 677	4 702 693	3 767 724	8 466 374	175 190
	1998..	N	N	41 859	1 507 992	29 467	61 288	875 641	4 458 253	3 449 230	7 877 174	206 397
	1997..	496	576	40 358	1 430 985	28 119	57 651	836 400	4 322 599	3 166 941	7 488 911	195 408

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>335313, Switchgear and switchboard apparatus manufacturing</b>												
United States .....	—	528	220	37 181	1 449 603	25 941	51 255	831 540	4 294 460	3 558 284	7 894 237	191 357
Alabama .....	2	9	2	170	6 676	111	220	2 902	13 039	20 478	33 210	1 803
Arizona .....	3	8	3	132	5 409	95	192	3 167	9 018	13 851	23 236	652
California .....	1	56	24	2 202	79 710	1 403	2 880	44 398	212 880	169 323	388 198	9 993
Connecticut .....	7	9	5	1 140	44 984	853	1 585	22 923	78 316	29 645	107 629	1 574
Florida .....	—	16	6	957	37 954	577	1 192	17 056	74 367	116 494	190 049	1 745
Georgia .....	1	20	7	1 154	40 495	872	1 803	24 290	125 281	117 882	244 798	6 547
Illinois .....	—	41	22	5 604	245 268	3 618	7 981	125 864	683 083	459 107	1 142 381	51 135
Iowa .....	—	6	3	451	84 542	1 029	1 947	60 082	206 758	259 423	470 859	10 087
Kentucky .....	—	10	4	1 568	63 076	1 090	2 070	39 057	304 801	147 276	449 574	5 241
Louisiana .....	—	6	4	211	7 232	133	269	4 334	8 568	12 540	24 705	380
Maryland .....	—	5	2	569	16 868	434	1 693	9 354	30 110	23 512	53 774	370
Massachusetts .....	—	7	5	745	40 839	319	600	14 594	117 621	62 579	186 068	3 417
Michigan .....	2	29	8	717	27 718	475	917	13 907	51 151	41 738	90 594	8 180
Minnesota .....	1	16	8	685	26 276	452	886	14 895	57 347	64 387	123 087	2 074
Mississippi .....	—	6	3	428	17 693	269	612	9 011	65 513	86 593	152 021	1 932
Missouri .....	—	13	5	1 190	36 182	985	1 862	27 278	180 409	89 017	269 928	3 378
New Jersey .....	6	16	4	533	25 224	331	617	13 507	59 317	29 599	88 124	1 027
New York .....	4	21	12	783	31 380	516	1 018	15 391	65 239	49 531	114 485	5 484
North Carolina .....	—	22	10	1 726	64 723	1 290	2 369	41 090	131 635	173 020	308 278	33 853
Ohio .....	—	43	15	2 240	83 204	1 490	2 495	45 889	266 138	160 302	428 663	7 372
Oklahoma .....	—	8	3	311	10 630	200	395	5 451	33 015	34 361	63 889	478
Oregon .....	5	5	3	192	6 806	123	239	3 670	20 106	19 181	39 339	422
Pennsylvania .....	—	26	14	2 020	80 877	1 313	1 903	36 676	237 075	246 450	496 468	3 919
South Carolina .....	—	10	6	2 293	86 197	1 657	3 410	51 311	236 600	264 334	506 698	6 254
Tennessee .....	2	13	8	1 143	41 135	946	1 896	31 765	161 139	129 642	290 546	3 492
Texas .....	1	32	10	2 812	92 050	2 178	4 391	60 717	347 073	283 947	630 472	11 631
Virginia .....	—	8	2	228	8 183	158	313	3 723	16 895	21 525	38 702	308
Washington .....	5	10	2	111	4 456	76	145	2 315	14 692	11 082	25 748	221
Wisconsin .....	—	18	7	816	34 383	513	1 077	17 705	108 677	75 113	188 401	1 222

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>335313, Switchgear and switchboard apparatus manufacturing</b>	
Companies <sup>1</sup> .....	number.. 446
All establishments <sup>2</sup> .....	number.. 528
Establishments with 1 to 19 employees .....	number.. 308
Establishments with 20 to 99 employees .....	number.. 131
Establishments with 100 employees or more .....	number.. 89
All employees <sup>3</sup> .....	number.. 37 181
Total compensation .....	\$1,000.. 1 885 932
Annual payroll .....	\$1,000.. 1 449 603
Total fringe benefits .....	\$1,000.. 436 329
Production workers, average for year .....	number.. 25 941
Production workers on March 12 .....	number.. 26 269
Production workers on May 12 .....	number.. 26 300
Production workers on August 12 .....	number.. 25 964
Production workers on November 12 .....	number.. 25 149
Production worker hours .....	1,000.. 51 255
Production worker wages .....	\$1,000.. 831 540
Total cost of materials .....	\$1,000.. 3 558 284
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 3 096 733
Resales .....	\$1,000.. 370 691
Purchased fuels .....	\$1,000.. 11 957
Purchased electricity .....	\$1,000.. 40 417
Contract work .....	\$1,000.. 38 486
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 681 044
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. S
Total value of shipments .....	\$1,000.. 7 894 237
Primary products value of shipments .....	\$1,000.. 6 951 521
Secondary products value of shipments .....	\$1,000.. 420 343
Total miscellaneous receipts .....	\$1,000.. 522 373
Value of resales .....	\$1,000.. 479 391
Contract receipts .....	\$1,000.. D
Other miscellaneous receipts .....	\$1,000.. D
Primary products specialization ratio .....	percent.. 94
Value of primary products shipments made in all industries .....	\$1,000.. 7 398 285
Value of primary products shipments made in this industry .....	\$1,000.. 6 951 521
Value of primary products shipments made in other industries .....	\$1,000.. 446 764
Coverage ratio .....	percent.. 94
Value added .....	\$1,000.. 4 294 460
Total inventories, beginning of year .....	\$1,000.. 901 763
Finished goods inventories .....	\$1,000.. 200 171
Work-in-process inventories .....	\$1,000.. 252 216
Materials and supplies inventories .....	\$1,000.. 449 376
Total inventories, end of year .....	\$1,000.. 837 190
Finished goods inventories .....	\$1,000.. 182 567
Work-in-process inventories .....	\$1,000.. 228 327
Materials and supplies inventories .....	\$1,000.. 426 296
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '2 241 630
Total capital expenditures (new and used) .....	\$1,000.. '191 357
Buildings and other structures (new and used) .....	\$1,000.. '31 019
Machinery and equipment (new and used) .....	\$1,000.. '160 338
Automobiles, trucks, etc., for highway use .....	\$1,000.. '3 718
Computers and peripheral data processing equipment .....	\$1,000.. '15 521
All other expenditures for machinery and equipment .....	\$1,000.. '141 099
Total retirements .....	\$1,000.. '103 057
Gross value of depreciable assets at end of year .....	\$1,000.. '2 329 930
Depreciation charges during year .....	\$1,000.. '148 876
Total rental payments .....	\$1,000.. 55 385
Buildings and other structures .....	\$1,000.. 32 057
Machinery and equipment .....	\$1,000.. 23 328
Total other expenses <sup>4</sup> .....	\$1,000.. 356 825
Response coverage ratio <sup>5</sup> .....	percent.. 76
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 33 159
Communications services <sup>4</sup> .....	\$1,000.. 9 799
Legal services <sup>4</sup> .....	\$1,000.. 3 859
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 2 890
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 6 080
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 11 283
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 3 780
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 16 922
Taxes and license fees <sup>4</sup> .....	\$1,000.. 22 384
All other expenses <sup>4</sup> .....	\$1,000.. 246 669

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
335313, Switchgear and switchboard apparatus manufacturing											
All establishments .....	—	528	37 181	1 449 603	25 941	51 255	831 540	4 294 460	3 558 284	7 894 237	'191 357
Establishments with—											
1 to 4 employees .....	9	152	328	11 965	248	433	7 307	37 517	32 343	70 864	'1 049
5 to 9 employees .....	7	84	575	22 427	424	814	13 403	66 309	64 133	131 121	'1 750
10 to 19 employees .....	3	72	952	37 711	643	1 265	20 610	140 007	103 725	243 411	'2 968
20 to 49 employees .....	2	83	2 663	106 793	1 764	3 552	55 897	244 964	208 019	450 268	'10 290
50 to 99 employees .....	1	48	3 582	136 840	2 270	4 353	66 095	426 118	345 973	772 600	'15 016
100 to 249 employees .....	1	46	7 145	263 198	4 966	9 832	146 693	611 014	631 069	1 262 764	'43 227
250 to 499 employees .....	—	25	8 532	331 460	5 876	11 124	193 573	981 427	797 577	1 788 142	'43 183
500 to 999 employees .....	—	15	9 582	404 488	6 861	13 794	248 356	1 446 860	1 131 692	2 587 417	'43 980
1,000 to 2,499 employees .....	—	3	3 822	134 721	2 889	6 088	79 606	340 244	243 753	587 650	'29 894
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	219	869	32 916	657	1 231	20 030	89 813	88 611	178 423	'2 660

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
335313	Switchgear and switchboard apparatus manufacturing .....	528	37 181	1 449 603	25 941	51 255	831 540	4 294 460	3 558 284	7 894 237	'191 357
3353131	Power circuit breakers, all voltages .	26	2 115	91 550	1 417	2 800	49 514	298 638	385 738	685 394	'18 819
3353133	Low voltage panelboards and distribution boards and other switching and interrupting devices, 1000 volts or less.....	90	9 051	331 289	6 514	12 549	207 026	1 056 417	1 167 403	2 233 232	'27 895
3353135	Fuses and fuse equipment less than 2300 volts (except power distribution cut-outs) .....	12	2 609	98 627	1 799	3 673	51 287	330 498	151 374	482 392	'24 152
3353137	Molded case circuit breakers, 1000 volts or less.....	12	4 776	193 810	3 335	5 548	108 695	923 428	438 954	1 369 874	'23 050
3353139	Duct, including plug-in units and accessories, 1000 volts or less ....	4	794	33 204	590	1 038	22 284	75 268	58 115	133 012	2 901
335313A	Switchgear, except ducts and relays .....	95	15 376	608 621	10 471	22 311	337 503	1 383 625	1 153 201	2 558 127	'86 556

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
335313	Switchgear and switchboard apparatus manufacturing .....	2002.. N	X	X	7 398 285
	1997.. N	N	X	X	7 353 591
3353131	Power circuit breakers, all voltages .....	2002.. N	X	X	696 789
	1997.. N	N	X	X	532 302
33531311	Power circuit breakers, all voltages .....	2002.. N	X	X	696 789
	1997.. N	N	X	X	532 302
3353131100	Power circuit breakers, all voltages <sup>1</sup> .....	2002.. 46	X	X	696 789
	1997.. 46	46	X	X	532 302
3353133	Low voltage panelboards and distribution boards and other switching and interrupting devices, 1000 volts or less .....	2002.. N	X	X	2 063 699
	1997.. N	N	X	X	2 331 111
33531331	Low voltage panelboards and distribution boards and other switching and interrupting devices, 1000 volts or less .....	2002.. N	X	X	2 063 699
	1997.. N	N	X	X	2 331 111
3353133100	Low voltage panelboards and distribution boards and other switching and interrupting devices, 1000 volts or less <sup>1</sup> .....	2002.. 112	X	X	2 063 699
	1997.. 139	139	X	X	2 331 111
3353135	Fuses and fuse equipment less than 2300 volts (except power distribution cut-outs) .....	2002.. N	X	X	477 372
	1997.. N	N	X	X	562 221
33531351	Fuses and fuse equipment less than 2300 volts (except power distribution cut-outs) .....	2002.. N	X	X	477 372
	1997.. N	N	X	X	562 221
3353135100	Fuses and fuse equipment less than 2300 volts (except power distribution cut-outs) <sup>1</sup> .....	2002.. 24	X	X	477 372
	1997.. 29	29	X	X	562 221
3353137	Molded case circuit breakers, 1000 volts or less .....	2002.. N	X	X	1 288 765
	1997.. N	N	X	X	1 294 712
33531371	Molded case circuit breakers, 1000 volts or less .....	2002.. N	X	X	1 288 765
	1997.. N	N	X	X	1 294 712
3353137100	Molded case circuit breakers, 1000 volts or less <sup>1</sup> .....	2002.. 26	X	X	1 288 765
	1997.. 24	24	X	X	1 294 712
3353139	Duct, including plug-in units and accessories, 1000 volts or less .....	2002.. N	X	X	210 402
	1997.. N	N	X	X	291 157
33531391	Duct, including plug-in units and accessories, 1000 volts or less .....	2002.. N	X	X	210 402
	1997.. N	N	X	X	291 157
3353139100	Duct, including plug-in units and accessories, 1000 volts or less <sup>1</sup> .....	2002.. 14	X	X	210 402
	1997.. 20	20	X	X	291 157
335313A	Switchgear, except ducts and relays .....	2002.. N	X	X	2 261 724
	1997.. N	N	X	X	1 956 370
335313A1	Switchgear, except ducts and relays .....	2002.. N	X	X	2 261 724
	1997.. N	N	X	X	1 956 370
335313A100	Switchgear, except ducts and relays <sup>1</sup> .....	2002.. 111	X	X	2 261 724
	1997.. 129	129	X	X	1 956 370
335313W	Switchgear and switchboard apparatus manufacturing, nsk, total .....	2002.. N	X	X	399 534
	1997.. N	N	X	X	385 718
335313WY	Switchgear and switchboard apparatus manufacturing, nsk, total .....	2002.. N	X	X	399 534
	1997.. N	N	X	X	385 718
335313WYWW	Switchgear and switchboard apparatus manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	235 554
	1997.. N	N	X	X	144 856
335313WYWY	Switchgear and switchboard apparatus manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	163 980
	1997.. N	N	X	X	240 862

<sup>1</sup>For additional detail, see Current Industrial Report MA335A, Switchgear and Industrial Controls.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.



**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3353131	Power circuit breakers, all voltages	
	United States . . . . . 2002..	696 789
	United States . . . . . 1997..	532 302
	California . . . . . 2002..	34 198
	California . . . . . 1997..	19 622
	North Carolina . . . . . 2002..	29 595
	North Carolina . . . . . 1997..	N
	Ohio . . . . . 2002..	30 087
	Ohio . . . . . 1997..	17 837
	Texas . . . . . 2002..	15 414
	Texas . . . . . 1997..	N
3353133	Low voltage panelboards and distribution boards and other switching and interrupting devices, 1000 volts or less	
	United States . . . . . 2002..	2 063 699
	United States . . . . . 1997..	2 331 111
	California . . . . . 2002..	94 689
	California . . . . . 1997..	159 677
	Florida . . . . . 2002..	41 278
	Florida . . . . . 1997..	33 378
	Illinois . . . . . 2002..	222 599
	Illinois . . . . . 1997..	200 028
	Michigan . . . . . 2002..	97 222
	Michigan . . . . . 1997..	118 027
	Minnesota . . . . . 2002..	72 675
	Minnesota . . . . . 1997..	69 399
	New Jersey . . . . . 2002..	7 736
	New Jersey . . . . . 1997..	45 466
	New York . . . . . 2002..	28 747
	New York . . . . . 1997..	27 055
	Ohio . . . . . 2002..	52 258
	Ohio . . . . . 1997..	121 434
	Pennsylvania . . . . . 2002..	16 322
	Pennsylvania . . . . . 1997..	24 367
	South Carolina . . . . . 2002..	158 933
	South Carolina . . . . . 1997..	188 447
	Tennessee . . . . . 2002..	66 183
	Tennessee . . . . . 1997..	N
	Texas . . . . . 2002..	238 617
	Texas . . . . . 1997..	205 946
	Washington . . . . . 2002..	11 766
	Washington . . . . . 1997..	N
	Wisconsin . . . . . 2002..	13 457
	Wisconsin . . . . . 1997..	9 590
3353135	Fuses and fuse equipment less than 2300 volts (except power distribution cut-outs)	
	United States . . . . . 2002..	477 372
	United States . . . . . 1997..	562 221
3353137	Molded case circuit breakers, 1000 volts or less	
	United States . . . . . 2002..	1 288 765
	United States . . . . . 1997..	1 294 712
	New York . . . . . 2002..	5 749
	New York . . . . . 1997..	3 793
3353139	Duct, including plug-in units and accessories, 1000 volts or less	
	United States . . . . . 2002..	210 402
	United States . . . . . 1997..	291 157
335313A	Switchgear, except ducts and relays	
	United States . . . . . 2002..	2 261 724
	United States . . . . . 1997..	1 956 370
	California . . . . . 2002..	115 038
	California . . . . . 1997..	86 496
	Illinois . . . . . 2002..	428 951
	Illinois . . . . . 1997..	352 672
	Louisiana . . . . . 2002..	15 321
	Louisiana . . . . . 1997..	7 988
	Massachusetts . . . . . 2002..	48 649
	Massachusetts . . . . . 1997..	N
	Minnesota . . . . . 2002..	37 771
	Minnesota . . . . . 1997..	15 318
	Missouri . . . . . 2002..	58 499
	Missouri . . . . . 1997..	N
	New York . . . . . 2002..	47 815
	New York . . . . . 1997..	23 751
	North Carolina . . . . . 2002..	138 474
	North Carolina . . . . . 1997..	73 570
	Ohio . . . . . 2002..	135 274
	Ohio . . . . . 1997..	120 756
	Pennsylvania . . . . . 2002..	81 918
	Pennsylvania . . . . . 1997..	70 646

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
335313	Switchgear and switchboard apparatus manufacturing		
00900001	Total materials .....2002..	X	3 096 733
	.....1997..	X	2 817 810
332000A9	Sheet metal products (excluding stampings) .....2002..	X	86 684
	.....1997..	X	45 648
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	79 805
	.....1997..	X	85 353
33200087	All other fabricated metal products (excluding forgings, castings, sheet metal products, bolts, nuts, screws, rivets, washers, and screw machine products) .....2002..	X	161 141
	.....1997..	X	145 119
33210000	Forgings .....2002..	X	7 057
	.....1997..	X	N
33100035	Castings, rough and semifinished .....2002..	X	65 244
	.....1997..	X	51 494
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 599
	.....1997..	X	41 924
33120016	Steel sheet and strip (including tinplate) .....2002..	X	72 396
	.....1997..	X	N
33120019	Steel structural shapes and sheet piling (excluding castings, forgings, and fabricated metal products) .....2002..	X	3 135
	.....1997..	X	5 597
33120091	All other steel shapes and forms (excluding castings, forgings, fabricated metal products, bars, bar shapes, plate, sheet, strip, structural shapes, and sheet piling) .....2002..	X	49 160
	.....1997..	X	65 256
33140001	Nonferrous metal smelter and refinery shapes, including precious metal (excluding castings, forgings, and fabricated metal products) .....2002..	X	56 304
	.....1997..	X	20 626
33100061	Aluminum and aluminum-base alloy shapes and forms (excluding wire, castings, forgings, and fabricated metal products) .....2002..	X	59 180
	.....1997..	X	50 718
33142123	Copper and copper-base alloy shapes and forms (excluding wire, castings, forgings, and fabricated metal products) .....2002..	X	147 013
	.....1997..	X	165 242
33100081	All other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	51 394
	.....1997..	X	26 876
33100087	Nonferrous wire and cable (including magnet wire, bare or insulated wire, etc.) .....2002..	X	23 328
	.....1997..	X	51 527
33531401	Industrial electrical control equipment purchased from other companies .....2002..	X	254 460
	.....1997..	X	218 429
33531403	Industrial electrical control equipment received from other plants of the same company .....2002..	X	355 739
	.....1997..	X	407 428
32711301	Porcelain, steatite, and other ceramic electrical products .....2002..	X	33 502
	.....1997..	X	47 514
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes .....2002..	X	82 187
	.....1997..	X	71 488
32521105	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. ....2002..	X	43 911
	.....1997..	X	50 326
33531301	Switches (excluding snap, toggle and push, and circuit breakers) .....2002..	X	62 364
	.....1997..	X	35 590
001900B5	Resistors, capacitors, transformers, and other electronic-type components (excluding electron tubes and semiconductors) .....2002..	X	104 788
	.....1997..	X	84 892
33441200	Printed circuit boards (without inserted components) for electronic circuitry .....2002..	X	50 855
	.....1997..	X	25 597
001900B9	Semiconductors, microprocessors, memory, ASICs and power semiconductor devices .....2002..	X	13 212
	.....1997..	X	11 129
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	564 679
	.....1997..	X	719 666
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	655 596
	.....1997..	X	390 371

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.